WE CLAIM:

1. A method of synthesizing an Arg-Gly-Asp-containing ligand for a member of the Arg-Gly-Asp-receptor family, comprising combining an Arg-Gly-Asp sequence with an additional chemical structure so as to conformationally restrict the stereochemical structure of said Arg-Gly-Asp sequence.

2. The method of claim 1 wherein said conformational restriction is effected by forming a cyclic peptide through a bridge between amino acids surrounding the Arg-Gly-Asp sequence.

3. The method of claim 2 wherein said bridge is a disulfide bridge.

4. The method of claim 2 wherein said bridge is a peptide bond.

5. The method of claim 1 wherein said conformational restriction is effected by inserting the Arg-Gly-Asp containing peptide into a helical structure.

6. The method of claim 5 wherein said helical structure is a triple helix.

7. The method of claim 5 wherein said helical structure is an alpha helix.

8. The method of claim 1 wherein said conformational restriction is effected by providing the Arg residue in the D form.

9. The method of claim 1 wherein said conformational restriction is effected by combining an Arg-Gly-Asp-containing peptide with an additional chemical moiety.

10. The method of claim 9 wherein said additional chemical moiety is a D-serine at the carboxy terminus of said Arg-Gly-Asp sequence.

11. The method of claim 9 wherein said additional chemical moiety is a phenylalanine at the amino terminus of the Arg-Gly-Asp sequence.

12. The method of claim 9 wherein said additional chemical moiety is a peptide.

13. A product made by the process of claim 1.

14. A method of increasing the specificity of an Arg-Gly-Asp-containing ligand for a member of the Arg-Gly-Asp receptor family comprising combining an Arg-Gly-Asp sequence with an additional chemical structure so as to conformationally restrict the stereochemical structure of said Arg-Gly-Asp sequence in such a way that the affinity of the Arg-Gly-Asp binding site sequence for a particular receptor is enhanced.

15. The method of claim 14 wherein said conformational restriction is effected by forming a cyclic peptide through a bridge between amino acids surrounding the Arg-Gly-Asp sequence.

16. The method of claim 15 wherein said bridge is a disulfide bridge.

17. The method of claim 15 wherein said bridge is a peptide bond.

18. The method of claim 14 wherein said conformational restriction is effected by inserting the Arg-Gly-Asp containing peptide into a helical structure.

19. The method of claim 18 wherein said helical structure is an alpha helix.

20. The method of claim 18 wherein said helical structure is an alpha helix.

21. The method of claim 14 wherein said conformational restriction is effected by providing the Arg residue in the D form.

22. The method of claim 14 wherein said conformational restriction is effected by combining the Arg-Gly-Asp containing peptide with an additional chemical moiety.

23. The method of claim 22 wherein said additional chemical moiety is a D-serine at the carboxy terminus of said Arg-Gly-Asp sequence.

24. The method of claim 22 wherein said additional chemical moiety is a phenylalanine residue at the amino terminus of the Arg-Gly-Asp sequence.

25. A composition of matter comprising an Arg-Gly-Asp-containing peptide and an additional chemical structure combined so as to restrict the stereochemical structure of the Arg-Gly-Asp sequence.

26. A peptide containing the sequence $-R_1-R_2-Arg-Gly-Asp-R_3-R_4-$ in which R_2 comprises about 0 to 5 amino acids and R_3 comprises about 0 to 5 amino acids and wherein R_1 and R_4 are amino acids connected by a bridge.

27. A stabilized peptide including the cell attachment promoting sequence Arg-Gly-Asp in which the Arg-Gly-Asp sequence is conformationally restricted.

28. The stabilized peptide of claim 27 wherein the cell attachment promoting Arg-Gly-Asp sequence is conformationally restricted by forming a cyclic peptide through a bridge between amino acids surrounding the Arg-Gly-Asp sequence.

29. The stabilized peptide of claim 28 wherein said bridge is a disulfide bridge.

30. The stabilized peptide of claim 28 wherein said bridge is a peptide bond.

31. The stabilized peptide of claim 27 weherein said conformational restriction is effected by inserting the Arg-Gly-Asp-containing peptide into a helical structure.

32. The stabilized peptide of claim 31 wherein said helical structure is a triple helix.

33. The stabilized peptide of claim 31 wherein said helical structure is an alpha helix.

34. The stabilized peptide of claim 27 wherein said conformational restriction is effected by combining the Arg-Gly-Asp containing peptide with an additional chemical moiety.

35. The stabilized peptide of claim 34 wherein said additional chemical moiety is a D-serine at the carboxy terminus of the Arg-Gly-Asp sequence.

36. The stabilized peptide of claim 34 wherein said additional chemical moiety is a phenylalanine residue at the amino terminus of the Arg-Gly-Asp sequence.

37. The stabilized peptide of claim 34 wherein said additional chemical moiety is a peptide.

38. A method of inhibiting attachment of cells in culture to a substrate comprising the steps of:

a. providing a stabilized peptide of claim 27 in solution; and

b. contacting said cells in culture with said stabilized peptide in solution.

39. A method of promoting cell attachment to a substrate comprising the steps of:

a. immobilizing the peptide of claim 27 on a substrate to form a stabilized peptide-associated substrate; and

b. exposing free cells in culture to said stabilized peptide-associated substrate.

40. A cyclized peptide comprising the sequence

Gly-Pen-Gly-Arg-Gly-Asp-Ser-Pro-Cys-Ala

(S——————S)

41. A peptide having cell binding activity containing one or more of the following sequences:

Arg-Gly-Asp-NH_2;

Phe-Arg-Gly-Asp-Ser-Pro;

Gly-Arg-Gly-Asp-Ser-Phe; or

Phe-Arg-Gly-Asp-Ser-Phe.

42. A cyclized peptide comprising the sequence

Gly-Pen-Gly-Glu-Arg-Gly-Asp-Lys-Arg-Cys-Ala

(S——————S)

43. A cyclized peptide comprising the sequence

Gly-Arg-Gly-Asp-Ser-Pro-Asp-Gly

(——————)

44. A cyclized peptide comprising the sequence

Gly-Pen-Gly-His-Arg-Gly-Asp-Leu-Arg-Cys-Ala

(——————)